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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,549	11/21/2001	Gyula Vigh		2580

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EXAMINER

OLSEN, KAJ K


ART UNIT

PAPER NUMBER

1753

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/990,549	Applicant(s) GYULA VIGH	
	Examiner Kaj K Olsen	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. Claims 1, 15, 16, 18-21 and 23-25 have all been amended to specify the isoelectric substance has a characteristic size that is larger than the pore size of various ion-permeable barriers. The examiner cannot find any explicit support in the specification for this amendment. In particular, page 5, lines 8-10 specified that the ion-permeable barriers restrict the passage of molecules greater than a specified size, and page 6, lines 5-9 specify that the isoelectric substance has a large molecular weight. However, these two sections still do not appear to lead us to the amended claim language that requires the choice of isoelectric substance be larger than the pore size for the barriers. The passage at page 5 never specifies anything about keeping the pore sizes below the size of the isoelectric substance nor does the passage at page 6 specify anything about making the isoelectric substance larger than the pore sizes of the ion-permeable barriers. Clarification as to how this amended language is supported by the originally filed disclosure is requested.

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-5, 7, 9, 10 and 12-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bier et al (USP 4,204,929) in view of Martin et al (USP 4,243,507). Both references were previously cited and relied upon (Martin was only utilized for the rejection of claim 10).

Martin's use for claims 1-5, 7, 9 and 12-26 now was necessitated by the applicant's amendment.

6. With respect to claims 1-5, 7, 9 and 12-26 were previously anticipated by the teaching of Bier as set forth in the previous office action. Applicant has amended the claims to specify that the isoelectric substance must be larger than the pore size for the ion-permeable barriers. Martin teaches in an alternate electrophoretic focusing device that isoelectric separation can be induced by the use of membranes that have had isoelectric character provided on them. These so called isoelectric membranes reduce the tendency for electroendosmosis. See col. 1, lines 40-53 and col. 2, line 13 through col. 3, line 44. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Martin for the gateway and method of Bier in order to minimize electroendosmosis. A macroscopic isoelectric membrane would clearly be larger than the pore sizes of the ion-permeable barrier.

7. With respect to claim 10, Martin also discloses in an alternate isoelectric device that the most convenient means for achieving various pHs for each isoelectric compartment is to utilized a combination of a weak acid and strong base (or a strong acid and weak base) (col. 4, lines 15-29). It would have been obvious to one of ordinary skill in the art at the time the invention was

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being made to utilize the teaching of Martin for the apparatus of Bier because the set forth acid and base combinations are the most convenient means for achieving selective pHs for isoelectric compartments.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bier '929 and Martin in view of Perry et al (USP 5,087,338).

9. The references set forth all the limitations of the claim, but did not explicitly recite the use of the set forth groups. Perry teaches in an alternate electrophoresis apparatus that suitable membranes can be constructed from cellulose esters and polysulfones (col. 7, lines 60-65). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Perry for the apparatus of Bier and Martin because the substitution of one known membrane material for another requires only routine skill in the art.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bier '929 and Martin in view of Dubrow (USP 5,164,055).

11. The references set forth all the limitations of the claim, but did not explicitly recite the use of a frit for forming ion-permeable barriers. Dubrow teaches in an alternate isoelectric focusing apparatus that glass frits are a known material for controlling fluid movement across a barrier (col. 4, lines 3-5 and col. 10, lines 52-62). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Dubrow for the apparatus of Bier and Martin because frits are a known barrier material and the substitution of one known barrier material for another requires only routine skill in the art.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bier '929 and Martin in view of WO 92/15,870 (hereafter "WO '870").

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13. The references set forth all the limitations of the claim but did not explicitly recite the use of an isoelectric substance from the claimed group. However, WO '870 teaches that polyamino-polycarboxylic acid is a conventional material utilized for forming an isoelectric substance (p. 2, line 25 through p. 3, line 2). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of WO '870 for the apparatus of Bier because the substitution of one known isoelectric substance for another requires only routine skill in the art.

#### ***Response to Arguments***

14. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (571) 272-1344. The examiner can normally be reached on Monday through Thursday from 6:30 A.M. to 4:00 P.M. and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen, can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kaj Olsen Ph.D.  
Primary Examiner  
AU 1753  
April 30, 2004